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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/232,397	01/15/1999	ALI SALEH	M-7165-US	1881

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EXAMINER

NGUYEN, HANH N

ART UNIT PAPER NUMBER

2662

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/232,397

Applicant(s)

SALEH ET AL.

Examiner

Hanh Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 03/14/03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13,33 and 35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13,33 and 35 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 8-13, 33 and 35 are rejected under 35 USC 103(a) as being unpatentable over **Cowan et al.** (US Pat. No. 6,457,050 B1) in view of **Venkatesan** (US Pat. No. 5,999,286).

In claims 1, 33 and 35, **Cowan et al.** discloses, in Fig. 2, a plurality of digital cross connect (DXC)/ switching nodes 12 coupled by trunk lines 30 (a plurality of nodes coupled by optical links). When a trunk line between switching nodes 12 breaks, route generator 68 (Fig.6) performs dynamic restoration by using dynamic route generator 25 (Fig.4) to determine an optimal restoral route for each impacted trunk (dynamically identifying physical path connecting intermediate nodes). When the restoral route is determined, route generator 68 establishes the restoral route by connecting specific switching nodes 12 (establishing virtual path by dynamically configuring a set of connections between nodes). See col.11, line 50 to col.12, line 20. **Cowan et al.** does not disclose the first node sending a message to the second node and dynamically identifying any intermediate nodes comprising the physical path.

Venkatesan discloses, in Fig.7, when a traffic connection of capacity 100 units between a source node S (a first node) and a destination node D (a second node) breaks, source node S (the first node) sends an explore message 70 (a message) to destination node D via tandem

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nodes T1, T2, T4, T4 (intermediate nodes) which are described in Fig.8, 9 (sending a message from the first node to the second node). See col.6, lines 57-65 & col.7, lines 20-35. The explore message 70 is eventually received at destination node D as described in Fig.11. Figures11, 13 and 14 show that destination node D sends a command message 100 back to source node S via tandem nodes T1-T4 which establishes a physical path with capacity capable to connect the source node S and destination node D (identifying intermediate nodes comprising physical path in response to the sending of message). See col.8, lines 1-10 & lines 35-45. & col.9, lines 20-35.

Since **Cowan et al.** refers to a method dynamically restoring connection , therefore; it would have been obvious to one of ordinary skills in the art to modify the **Cowan et al.** by adding the features of sending the explore message to establish a physicalconnection. The source node can sends a request message to destination node via intermediate nodes for establishing an alternate physical path when a main path breaks.

In claim 3, the limitation of this claim has been addressed in claim 1.

In claim 9, the limitation of this claim has been addressed in claim 1.

In claim 10, the limitation of this claim has been addressed in claim 1.

In claims 2, 11, 12 and 13, **Cowan et al.** discloses, in Fig.4, RTNDD 40 that includes status of DXC/ switching nodes 12. Status information in each switching node 12 identifies current cross-connected ports the switching nodes 12 are connected as well as spare ports that are available (each node maintains a database which allows the discovering of physical path to proceed more quickly). See col.8, lines 5-15. In Fig.6 discloses a break isolator 66 that applies certain criteria to determine if a trunk break/outage has occurred by receiving a number of alarms in a time interval (Testing to determine if a node/link have failed). See col.11, lines 42-

45. In addition, network control 36 (Fig.3) perform evaluation tests and analysis on links 30 and switching nodes 12. See col.7, lines 50-55.

In claims 4 and 8, **Cowan et al.** disclose network control 36 (Fig.3) issues connect and disconnect commands to links 30. (terminating virtual path by automatically de-allocating intermediated links). See col.7, lines 42-55.

Claims 5 and 7 are rejected under 35 USC 103(a) as being unpatentable over **Cowan et al.** (US Pat. No. 6,457,050 B1) in view of well-known skill in the art.

In claims 5 and 7, **Cowan et al.** does not disclose the intermediate links are available for re-use upon de-allocation. It is well-known skill in the art that once a termination message is sent on the intermediate links connecting end-point nodes to terminate primary path, one or more of the intermediate links are still available to couple end-point nodes. Therefore, it would have been obvious connect the rest of intermediate links between end-point nodes in **Cowan et al.** in order to obtain shortest paths between end-point nodes.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Commeford et al.(US Pat. No. 6,134,671) discloses System and Method for Dynamically Generating Restoration Routes Within a Communications Network.

Commerford (US Pat. No. 5,920,257) discloses System and Method for Isolating an Outage Within a Commuications Network.

Croslin (US Pat. No. 5,737,319) discloses Dynamic Network Topology Determination.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 703 306-5445. The examiner can normally be reached on Monday-Friday 8:30 AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703 306-4744. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-3988 for regular communications and 703 308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Fax number : 703 872-9314

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Hanh Nguyen

H. Nguyen

May 19, 2003

KWANG BIN YAO
PRIMARY EXAMINER

[Signature]